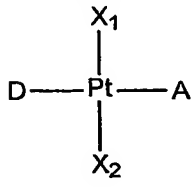
Claims

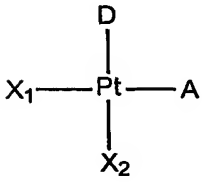
1. Use of a platinum complex, having at least one reactive moiety for attachment to a chemical or biological entity, for creating a defined shift in the molecular mass of said entity in order to facilitate mass spectrometric analysis of said entity or of a sample comprising said entity.

2. Use according to claim 1, wherein said platinum complex is represented by one of the following formulas:



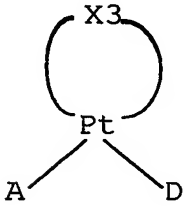
formula 1a

or



formula 1b

or



formula 1c

wherein Pt represents the platinum atom, A and D are independently chosen from the group of reactive moieties formed by Cl^-, NO_3^-, HCO_3^-, CO_3^{2-}, SO_3^{2-}, ZSO_3^-, I^-, Br^-, F^-, acetate, carboxylate, phosphate, ethyl nitrate, oxalate,

citrate, a phosphonate, ZO^-, and water, Z being hydrogen or an alkyl or aryl group having from 1 to 10 carbon atoms;
wherein X_1 and X_2 are independently chosen from the group of inert moieties formed by NH_3, NH_2R, NHRR', NRR'R" groups, wherein R, R' and R" represent an alkyl group having from 1 to 6 carbon atoms;
and wherein X_3 represents an inert bidentate moiety as a stabilizing bridge, such as an alkyl diamine, said alkyl preferably having 2 to 6 carbon atoms.

3. Use according to claim 2, wherein X_3 represents a heterocyclic diamine or heteroaryl diamine, such as a heterocyclic-1,2-diamine, heteroaryl-1,2-diamine, or aryl diamine.

4. Use according to any of claims 1-3, wherein said platinum complex comprises a marker.

5. Use according to claim 4, wherein said a marker and/or a reactive moiety are connected to the platinum moiety of said platinum complex through a spacer.

6. Use according to claim 4 or 5, wherein said marker is a fluorescent label.

7. Use according to any one of the preceding claims, wherein said entity is selected from the group consisting of amino acids, peptides, oligopeptide, polypeptides, proteins, immunoglobulins, enzyms, synzyms, phospholipides, glycoproteins, nucleic acids, nucleosides, nucleotides, oligonucleotides, polynucleotides, peptide nucleic acids, peptide nucleic acid oligomers, peptide nucleic acid polymers, amines and aminoglycosides.

8. A method for rendering a chemical or biological entity distinguishable by mass spectrometry, said method comprising the step of differentially labeling said entity with at least one platinum complex as defined in any one of claims 1-6.

9. A method for mass spectrometric analysis of a chemical or biological entity, said method comprising the steps of differentially labeling said entity

with at least one platinum complex as defined in any one of claims 1-6 and analysing said entity by mass spectrometry.

10. A method according to claim 8 or 9, wherein at least two entities are labeled and wherein said entities originate from different samples.

11. A method according to claim 10, wherein said step of differentially labeling said entity is performed with at least two platinum complexes as defined in any one of claims 1-6, wherein said platinum complexes are of different molecular mass, said difference in molecular mass being $\geq$1 Da.

12. A set of at least two platinum complexes of different molecular mass, wherein each of said platinum complexes is as defined in any one of claims 1-6.

13. A kit of parts comprising the set of at least two platinum complexes of different molecular mass as defined in claim 12.

14. Kit of parts according to claim 13, further comprising at least one item selected from the group consisting of reaction instructions, test samples, test tubes or strips, buffers, marker preparations and preparations for adjusting the ionic strength.

15. A kit of parts for employing a method according to any of the claims 8-11.